

April 11, 2007

Dan Pitman Air Quality Permitting Division of Environmental Quality 1410 N. Hilton Boise, Idaho 83706

Dear Mr. Pitman,

In response to your April 4, 2007 e-mail, the Thompson Creek Mining Company (TCMC) is submitting the following information for your consideration. Attached are spread sheets with the revised information and emissions inventory.

#### Response to Item #1 in IDEQ E-mail

TCMC wishes to clarify that, both the East and West Ore Feeders are controlled with wet venturi scrubbers as stated on page 2 of 26, Appendix C of the Air Quality Operating Permit Renewal Application, Tier II. These sources are not controlled by a baghouse as stated on pages 11 of 26 and 12 of 26. The reference to the baghouse control for the Ore Feeders was an oversight in the application. I apologize for any confusion the baghouse reference created.

In regard to the control efficiency for the Ore Feeder venturi scrubbers, TCMC has revised the prior 99% control efficiency to the AP 42 recommended 95% (AP 42 Volume 1, Fifth Edition, Section 11.24.3, Page 11.24-6) per your request.

The table below shows how the revised control efficiency affects the annual and hourly emission rates while retaining the same emission factors relied on in the Tier II application.

Table 1 Ore Feeder Emissions

Emission Factor	Emission Rate Control (tons/yr) Efficiency		Emission Rate (lbs/hr)
		PM	
0.12 lbs/ton	8.76	99%	2.00
0.12 lbs/ton	43.8	95%	10.00
	1	PM10	
0.06 lbs/ton	4.38	99%	1.00
0.06 lbs/ton	21.9	5.00	

The attached spread sheets reflect these changes.

THOMPSON CREEK MINING COMPANY
PO BOX 62
CLAYTON, ID 83227

#### Response to Item #2 in IDEQ E-mail

An error was made in the units for the Boiler #1 and Hot Oil Boiler PM-10 emission factors in the permit application for the pound per hour calculation. TCMC has changed the emission factor as requested to 2.3 lbs/ $10^3$  gallons for PM-10. The table below shows the emission rates using this emission factors.

Table 2 Boiler Emission Rates

Source	Emission Factor	Emission Rate (tons/yr)	Emission Rate (lbs/hr)
Boiler #1	2.3 lbs/10 <sup>3</sup> gal	0.33	0.076
Hot Oil Boiler	2.3 lbs/10 <sup>3</sup> gal	0.1360	0.031

The attached spread sheets reflect these changes.

#### Response to Item #3 in IDEQ E-mail

The Waste Oil heaters in question are used to heat the maintenance shops (i.e., they are space heaters). The Waste Oil heaters were not modeled, nor were emissions estimates provided in the Tier II application as TCMC considers the space heaters to be exempt from Permit to Construct requirements under IDAPA 58.01.01.222.02.h (used Oil Fired Space Heaters) and, therefore, exempt from the Tier II Permit coverage (as was the case under the past Tier II permit). The total emissions for the space heaters were, however, calculated (in the tons per year) to determine whether the facility is a Title V (Tier I) major facility (which it is not). At your request TCMC estimated the emissions from the space heaters using the following emission factor:

PM10 31.15 lb/10³ gallons Ash content at 0.65% AP 42 Volume 1, Fifth Edition, Section 1.11, Table 1.11-1

The table below shows the estimated annual and hourly emission rates using this emission factor. The emission rates are extremely low.

Table 3 Waste Oil Heater Emission Rates (PM-10)

Source Waste Oil Heaters	Emission Factor	Emission Rate (tons/yr)	Emission Rate (lbs/hr)
Truck Shop 1	31.15 lbs/10 <sup>3</sup> gal	0.039	0.11
Truck Shop 2	31.15 lbs/10 <sup>3</sup> gal	0.039	0.11
Wash Bay 1	31.15 lbs/10 <sup>3</sup> gal	0.039	0.11
Wash Bay 2	31.15 lbs/10 <sup>3</sup> gal	0.039	0.11

The stack information you requested is located in the attached spread sheets. TCMC continues to believe that the space heaters should be exempt from Tier II Permit coverage (each heater runs 2,800 hours per year maximum and combined add less than 0.7 tons per year and 0.5 pounds per hour of PM-10 to the facility

totals). Let us know at your earliest convenience if you disagree. The attached spread sheets nonetheless accounts for the emissions from the space heaters in the total emissions.

#### Response to #4

TCMC will accept IDEQ modeling of the updated emissions inventory. TCMC would offer to conduct the modeling to help expedite the completion of this application process. Please contact me at your earliest convenience should IDEQ want to proceed with TCMC conducting the modeling.

Sincerely,

Eric Tilman

Environmental Engineer,

Thompson Creek Mine

#### **SECTION 1: GENERAL INFORMATION**

COMPANY NAME	Thompson Creek Mining Company
STREET ADDRESS OR P.O. BOX	P.O. Box 62
CITY	Clayton
STATE Idaho	ZIP 83227
PERSON TO CONTACT	Bert Doughty
TITLE	Environmental Manger
PHONE NUMBER	208-838-2200
EXACT PLANT LOCATION	2.5 Miles north of Highway 75 between Thompson Creek and Squaw Creeek
GENERAL NATURE OF BUSINESS	Molybdenum mining
NUMBER OF FULL-TIME EMPLOYEES	220
PROPERTY AREA (ACRES)	1900  REASON FOR APPLICATION = <b>(6)</b> (1) Permit to Construct a new facility; (2) Permit to Modify an existing source; (3) Permit to Construct a new source at an existing facility (4) Change of Owner or Location; (5) Tier I Permit to Operate; (6) Tier II Permit to Operate
DISTANCE TO NEAREST	
STATE BORDER (MILES)	68
SIC	1066
PLANT LOCATION COUNTY Cu	ster ELEVATION (FT) ~ 7500
UTM ZONE	11
UTM (X) COORDINATE (KM)	694 UTM (Y) COORDINATE (KM) 4912
NAME OF FACILITIES	LOCATION OF OTHER FACILITIES
The following facilities are under the contr	ol of Thompson Creek Mining Co. and have permittable emissions to the air.
Thompson Creek Mine	
OWNER OR RESPONSIBLE OFFICIAL	Kent Watson
TITLE OF RESPONSIBLE OFFICIAL	Vice President
Based on information and belief formed af accurate, and complete.	ter reasonable inquiry, I certify that the statements and information in this document are true,
SIGNATURE OF RESPONSIBLE OFFICIA	DATE

## THOMPSON CREEK MINE SOURCE GENERAL INFORMATION

SECTION 2: FUEL BURNING E	QUIPMENT										
SOURCE	DESCRIPTION	DATE INSTALLED	DATE LAST MODIFIED	MANUFACTURER	MAKE/MODEL	USED FOR PROCESS %		FUEL TYPE	FUEL CODE	HEAT CONTENT Btu/gal	
Waste Oil Heaters						0	100		02	137000	
											_
Boilers		1001		V 1 01 : 1		100				407000	
Boiler #1	steam boiler	1981		York Shipply		100	0	fuel oil	02	137000	
Hot Oil Boiler	Hot oil boiler	1981		Parker		100	0	fuel oil	02	137000	
LPG Heating							100				
GENERATORS											
Motivator	emergency power generator	1981		Cummins		100	0	fuel oil	02	137000	
Mill Auxiliary	emergency power generator	1981		Caterpillar	SR4 ARR:5N5060	100	0	fuel oil	02	137000	
Pumpback	emergency power generator	1981		Caterpillar	SR4 ARR:1W0739	100	0	fuel oil	02	137000	
Tailings Pumps	emergency power generator	1996		Waukesha	VHP L5792	100	0	fuel oil	02	137000	
rainings rumps	emergency power generator	1330		VVauncona	VIII LOTOZ	100	0	idei oli	02	137000	-
SECTION 3: PROCESS AND M	ANUFACTURING OPERATION	IS									
		Ī			POLLUT	ON CONTROL EQ	UIPMENT				
			DATE								
		DATE	LAST								
SOURCE	DESCRIPTION	INSTALLED	MODIFIED	MANUFACTURER	MAKE/MODEL	DESCRIPTION	QUANTITY	TYPE	CODE	MANUFACTOR	MAKE/MODEL
Primary Crusher	Gyratory Crusher	1981		GATX-Fuller		Baghouse	1	baghouse	O18	American Air Filter	jet pulse modular Fabripak
Overland Conveyor Drive 1	conveyor transfer point	1981		GATX-Fuller		Baghouse	1	baghouse	O18	American Air Filter	jet pulse modular Fabripak
East and West Ore Feeders	apron feeders	1981				Wet Scrubber	2	Venturi	O53	Ducon	multivane, Model IV
Holoflite Dryer #1	Holoflite Dryer	1981		Holo Flite	D-1216-5	Wet Scrubber	1	Venturi	O53	Luftrol	KVS10
		1989				Smog Hog	1	ESP	O10	United Air Specialists	SH-10
Leach Plant	Leach fume collection	1981				Caustic Scrubber	1	Packed	O70	Ceilicote	SPT-82
Lube Grade Dryer Stack		1989				Smog Hog	1	ESP	O10	United Air Specialists	SH-10
Holoflite Dryer #2	Holoflite Dryer	1989		Joy-Denver	D-1216-5	Wet Scrubber	1	Venturi	O53	Luftrol	KVS10
Rotary Kiln	Rotary kiln dryer	1989		Christian	12-13-16-UNI	Wet Scrubber	1	Venturi	O54	Luftrol	KVS11
Jet Mill/Jet Mill Baghouse	pneumatic mill	1989		Pulvajet Mill	Aljet Model 810 CIHL	Baghouse	1	baghouse	O18	Mikro Pulsaire	36-S-10-30
Tech Fine Packaging Bin	packaging	1989				Baghouse	1	baghouse	O18	Mag-Pac	52-65
Pancake Mill Feed Bin	feed bin	1992				Baghouse	1	baghouse	O18	American Air Filter	AR35
Pancake Mill	pneumatic mill	1992		Jet Pulverizer	Micron-Master						
Super Fine Packaging Bin	packaging	1992				Baghouse	1	baghouse	O18	Mag-Pac	52-65
Pebble Lime Baghouse	pneumatic transport system	1981				Baghouse	1	baghouse	O18	Dalamate	
Portable Crusher	gravel crusher	1981		Pioneer	2036	Water Sprays		water spray	O61		
SECTION E STORAGE :::::	AND INC OF LIGHT CO. VEN	TO 0 OTUES	VOL ATU = 1	NO MEDOLINIDO			-			-	-
SECTION 5: STORAGE AND H	ANDLING OF LIQUID SOLVEN	IS & OTHER	VOLATILE (	OMPOUNDS						1	1
			CAPACITY								
DESCRIPTION	TANK TYPE	CONTENTS		VENT TYPE	LOCATION						
			(gal)	open, turned down							1
Diesel fuel storge, fueling Diesel fuel storge, fueling	Horizontal cylinder, fixed roof Horizontal cylinder, fixed roof	diesel fuel diesel fuel	20,000 10,000	open, turned down							
Diesel fuel storge, fueling	Horizontal cylinder, fixed roof	diesel fuel	10,000	open, turned down							1
Diesel fuel storge, fueling	Horizontal cylinder, fixed roof	diesel fuel	1,000	open, turned down							
Diesel fuel storge, fueling	Horizontal cylinder, fixed roof	diesel fuel	10,000	open, turned down							1
Diesel fuel storge, fueling	Horizontal cylinder, fixed roof	diesel fuel	500	open, turned down							1
Diesel fuel storge, fueling	Horizontal cylinder, fixed roof	diesel fuel	500	open, turned down			1			+	+
gasoline storage, fueling	Horizontal cylinder, fixed roof	gasoline	10,000	open, turned down							1
gasonine storage, lucining	i ionzoniai cymiuei, lixeu 1001	yasuiiile	10,000	open, tunieu uown	reny bunding		1				

# THOMPSON CREEK MINE STACK INFORMATION

	HEIGHT		EXIT	FLOWRATE		
STACK/SOURCE	(ft)	I.D. (in)	TEMP (F)	(acfm)	DIRECTION	COVERED
PROCESS AND MANUFACTURING		, ,		,		
OPERATIONS						
Primary Crusher Stack	65.58	27.96	ambient	18000	vertical	no
Overland Conveyor Stack	10	18	ambient	5000	horizontal	no
East Ore Feeders Stack	85.33	18.5	ambient	58.2	vertical	no
West Ore Feeders Stack	85.33	18.5	ambient	58.4	vertical	no
Holoflite Dryer #1 Stack	81	11.75	ambient	501.4	vertical	no
Leach Fume Scrubber Stack	90.25	16	ambient	5341	vertical	no
Lube Grade Dryer Stack	90.25	8	ambient	347	vertical	no
Jet Mill Baghouse Stack	37.5	19.5	ambient	1728	vertical	yes
Tech Fine Packaging Baghouse Stack	38	6	ambient	146	horizontal	no
Pancake Mill Feed Bin Baghouse Stack	14.75	8.25	ambient	444.9	horizontal	no
Super Fine Packaging Bin Baghouse Stack	25	6	ambient	593.7	horizontal	no
Pebble Lime Baghouse	68.88	12	ambient	2000	vertical	yes
FUEL BURNING EQUIPMENT						
Waste Oil Heaters						
Truck Shop 1	25	8	270	850	horizontal	no
Truck Shop 2	25	8	270	850	horizontal	no
Wash Bay 1	25	8	270	850	horizontal	no
Wash Bay 2	25	8	270	850	horizontal	no
Boiler #1	84	12	500	408	vertical	no
Hot Oil Boiler	84	12	500	936	vertical	no
GENERATORS						
Motivator	15	4	900	2325	vertical	no
Mill Auxiliary	20	6	1200	1570	vertical	yes
Pumpback	12	6	900	2430	vertical	no
Tailings Pumps	15	10	900	1985	horizontal	no

# THOMPSON CREEK MINE PCE DATA

	PRESSURE			WATER		
SCRUBBER/SOURCE	DROP (" H2O)	LOW	HIGH	FLOW RATE (gpm)	LOW	HIGH
East Ore Feeders Reclaim Dust Scrubber	( 1120)	6	16	KATE (gpiii)	14	111011
West Ore Feeders Reclaim Dust Scrubber		6	16		14	17
Holoflite Dryer #1 Venturi Scrubber		0.13	0.23		6	12
Leach Fume Caustic Scrubber		0.13	10		N/A	58
Holoflite Dryer #2 Venturi Scrubber		0.13	0.23		6	12
Rotary Kiln Venturi Scrubber		0.12	0.22		7	13
			<del>-</del>			
	PRESSURE			AIR-TO-		
	DROP			CLOTH		
BAGHOUSE/SOURCE	(" H2O)	LOW	HIGH	RATIO		
Primary Crusher Baghouse		3	7	10:01		
Overland Conveyor Baghouse		3	7	7:01		
Jet Mill Baghouse		0.7	1	10:01		
Tech Fine Packaging Bin Baghouse		1	1.5	2:01		
Pancake Mill Feed Bin Baghouse		0.2	8	5:01		
Super Fine Packaging Bin Baghouse		1.3	6	1:01		
Pebble Lime Baghouse		3	5	9:01		
ESP						
Holoflite Dryer #1 Smog Hog	Triple Pass					
Lube Grade Dryer Stack Smog Hog	Triple Pass					

# THOMPSON CREEK MINE PROCESSING DATA

SECTION 2: FUEL BURNING	EQUIPMENT							
Waste Oil Heaters	10,000	2,800	3.6	A =	0.65			
	gal/year	hr/yr	gal/hr	S =	0.5			
Boilers								
Boiler #1	289,080	33	8760	S =	0.5			
Hot Oil Boiler	118,260	13.5	8760					
	gal/year	gal/hr	hr/yr					
LPG Heating	25,000			S =	0.16	gr/1000 ft3		
	gal/year							
ELECTRIC POWER GENERAT	TORS							
Motivator	3,000	1490		S =	0.5			
Mill Auxiliary	500	265		_				
Pumpback	500	450						
Tailings Pumps	500	1272						
	hr/yr	hp						
MOBIL EQUIPMENT COMBUS	STION			S =	0.5			
Haul Trucks	66,000	780,000		0-	0.0			
Dozers	9,000	700,000						
Wheeled Loaders	9,000							
Motor Graders	9,000	16,400						
Wheeled Dozers	9,000							
Misc.	2,000							
	hours/year	VMT						
SECTION 3: PROCESS AND N	/ANUFACTURIN	G OPERATI	ONS					
Primary Crusher	16,242,500	3650	4450					
<b>,</b>	tons/year	hr/yr	ton/hr					
Overland Conveyor	16,242,500	3650	4450					
Overland Conveyor	tons/year	hr/yr	ton/hr					
Foot and Woot Ora Fraday	44.000.000	0700	0.4	40.000	4.007	2 222 222		
East and West Ore Feeders	14,600,000	8760	24	40,000	1,667	3,333,333		
	tons/year	hr/yr	hr/day	tons/day	ton/hr	lb/hr		

# THOMPSON CREEK MINE PROCESSING DATA

Holoflite Dryer #1	81,030	8760	9.25					
,	tons/year	hr/yr	ton/hr					
Leach Plant	2,783	8760						
	tons/year	hr/yr						
LUBE GRADE HPM PRODUC	CTION							
Holoflite Dryer #2	1,253	24	365	8760	5488.14	Vented through	a commo	on stack
Rotary Kiln	1,253	24	365	8760	5488.14	One source		
	lb/hr	hr/day	day/yr	hr/yr	ton/yr			
Jet Mill/Jet Mill Baghouse	1,600	24	300	7200	5760	feed from the J	M feed bii	n, discharge to JM BH
Tech Fine Packaging Bin	1,600	24	300	7200	5760	feed from JM ba		, <u>g</u>
	lb/hr	hr/day	day/yr	hr/yr	ton/yr			
Pancake Mill Feed Bin	1,450	3412	850	feed comi	na from the	jet mill to the par	ncake mill	feed hin
Super Fine Packaging Bin	1,450	8760	331			pancake mill to t		
Capor rine ricentaging bin	tons/year	hr/yr	lb/hr	1000 0011111		parioano mini to t	o oapoi	into eterage en
Pebble Lime Baghouse	5,000	416.667	12					
Tobbio Eimo Bagnodoo	tons/year	hr/yr	ton/hr					
Portable Crusher	700,000	3500	200					
	tons/year	hr/yr	ton/hr					
SECTION 5: STORAGE AND	HANDLING OF I	IQUID SOLV	/ENTS & C	THER VOL	ATILE COM	/POUNDS		
Gasoline								
Filling - submerged	75,000							
Breaking	75,000							
Fueling	75,000							
Spillage	75,000							
	gal/year							
Diesel	<u> </u>							
Loading - submerged	693,000							
	gal/year							

### **THOMPSON CREEK MINE EMISSION FACTORS**

	EMISSION FACTOR TSP OR	EMISSION FACTOR	
SOURCE	OTHER	PM10	FACTOR REFERENCE
PROCESS AND MANUFACTURING			
OPERATIONS			
Primary Crusher	0.5	0.05	AP 42 Volume 1, Fifth Edition, Table 11.24.2
	lb/ton	lb/ton	
Overland Conveyor	0.12	0.06	AP 42 Volume 1, Fifth Edition, Section 11.24.2, Table 11.24-2
	lb/ton	lb/ton	
East and West Ore Feeders	0.12	0.06	AP 42 Volume 1, Fifth Edition, Section 11.24.2, Table 11.24-2
	lb/ton	lb/ton	, , , , , , , , , , , , , , , , , , , ,
Holoflite Dryer #1	4.93	1.97	Request for Permit Modification, Thompson Creek Mining Company, March 1996 (Brown and Caldwell), Section D, Emissions Estimates.
	lb/ton	lb/ton	
Leach Plant	0.003 lb/hr		HCI Emission Rate, Stack Sampling, AMTEST AIR QUALITY, LLC, October 28, 1998
		2.224	
Lube Grade Dryer Stack	0.001	0.001	Stack Sampling, AMTEST AIR QUALITY, LLC, February 28, 2000.
Holoflite Dryer #2/Rotary Kill Rotary Kiln	lb/hr		
Jet Mill Baghouse	0.016	0.016	Stack Sampling, AMTEST AIR QUALITY, LLC, October 27-28, 1998.
Tech Fine Packaging Bin BH	0.013	0.013	Stack Sampling, AMTEST AIR QUALITY, LLC, October 27-28, 1998.
5 5	lb/hr	lb/hr	, , , , , , , , , , , , , , , , , , , ,
Pancake Mill Feed Bin BH	0.001	0.001	Stack Sampling, AMTEST AIR QUALITY, LLC, May 25, 1999.
Super Fine Packaging Bin BH	0.024	0.024	Stack Sampling, AMTEST AIR QUALITY, LLC, May 26, 1999.
. 5 5	lb/hr	lb/hr	

# THOMPSON CREEK MINE EMISSION FACTORS

			Request for Permit Modification, Thompson Creek Mining Company, March
Pebble Lime Baghouse	2.2	0.88	1996 (Brown and Caldwell), Section D, Emissions Estimates.
	lb/ton	lb/ton	
FUEL BURNING EQUIPMENT			
Waste Oil Heaters	41.6	31.15	Ap-42, Fifth Edition, Table 1.11-1.
	lb/1000 gal	lb/1000 gal	A = 0.65 (ash at 0.65%)
Boilers			
Boiler #1	0	2.3	Ap-42, Fifth Edition, Table 1.3-2.
Hot Oil Boiler	0	2.3	Ap-42, Fifth Edition, Table 1.3-2.
	lb/1000 gal	lbs/1000 gals	
LPG Heating	0	0.1	Ap-42, Fifth Edition, Table 1.5-1.
	lb/1000 gal	lb/1000 gal	
FUEL BURNING EQUIPMENT	NOx		
Waste Oil Heaters	55		Ap-42, Fifth Edition, Table 1.3-2.
	lb/1000 gal		
Boilers			
Boiler #1	20		Ap-42, Fifth Edition, Table 1.3-2.
Hot Oil Boiler	20		Ap-42, Fifth Edition, Table 1.3-2.
	lb/1000 gal		
LPG Heating	8.8		Ap-42, Fifth Edition, Table 1.5-1.
	lb/1000 gal		
FUEL BURNING EQUIPMENT	SOx		
Waste Oil Heaters	73		Ap-42, Fifth Edition, Table 1.3-2.
	lb/1000 gal		
Boilers			
Boiler #1	71		Ap-42, Fifth Edition, Table 1.3-2.
Hot Oil Boiler	71		Ap-42, Fifth Edition, Table 1.3-2.
	lb/1000 gal		

## **THOMPSON CREEK MINE EMISSION FACTORS**

LPG Heating	0.014		Ap-42, Fifth Edition, Table 1.5-1.
	lb/1000 gal		
FUEL BURNING EQUIPMENT	СО		
Waste Oil Heaters	5		Ap-42, Fifth Edition, Table 1.3-2.
	lb/1000 gal		
Boilers			
Boiler #1	5		Ap-42, Fifth Edition, Table 1.3-2.
Hot Oil Boiler	5		Ap-42, Fifth Edition, Table 1.3-2.
	lb/1000 gal		
LPG Heating	1.8		Ap-42, Fifth Edition, Table 1.5-1.
	lb/1000 gal		
ELECTRIC POWER GENERATORS			
Motivator	0	0.0022	AP-42, Fifth Edition, Table 3.3-1
Mill Auxiliary	0	0.0022	AP-42, Fifth Edition, Table 3.3-1
Pumpback	0	0.0022	AP-42, Fifth Edition, Table 3.3-1
Tailings Pumps	0	0.0022	AP-42, Fifth Edition, Table 3.3-1
	lb/hp-hr	lb/hp-hr	
ELECTRIC POWER GENERATORS	NOx		
Motivator	0.031		AP-42, Fifth Edition, Table 3.3-1
Mill Auxiliary	0.031		AP-42, Fifth Edition, Table 3.3-1
Pumpback	0.031		AP-42, Fifth Edition, Table 3.3-1
Tailings Pumps	0.031		AP-42, Fifth Edition, Table 3.3-1
	lb/hp-hr		
ELECTRIC POWER GENERATORS	СО		
Motivator	0.0068		AP-42, Fifth Edition, Table 3.3-1
Mill Auxiliary	0.0068		AP-42, Fifth Edition, Table 3.3-1
Pumpback	0.0068		AP-42, Fifth Edition, Table 3.3-1
Tailings Pumps	0.0068		AP-42, Fifth Edition, Table 3.3-1
	lb/hp-hr		

# THOMPSON CREEK MINE EMISSION FACTORS

ELECTRIC POWER GENERATORS	SOx	
Motivator	0.00205	AP-42, Fifth Edition, Table 3.3-1
Mill Auxiliary	0.00205	AP-42, Fifth Edition, Table 3.3-1
Pumpback	0.00205	AP-42, Fifth Edition, Table 3.3-1
Tailings Pumps	0.00205	AP-42, Fifth Edition, Table 3.3-1
	lb/hp-hr	

### THOMPSON CREEK MINE TSP EMISSIONS

			UNCONTROLLED			TOTAL	TOTAL
	PROCESS	EMISSION	EMISSIONS	CONTROL	CONTROL	EMISSIONS	<b>EMISSIONS</b>
SOURCE	RATE	FACTOR	(TONS/YEAR)	SYSTEM	<b>EFFICIENCY</b>	(TONS/YEAR)	(lb/hr)
<b>SECTION 2: FUEL BURNING E</b>	QUIPMENT		,				, ,
See PM10 Emissions							
<b>SECTION 3: PROCESS AND M</b>	IANUFACTURII	NG OPERATION	ONS				
Primary Crusher	16,242,500	0.5	4060.63	baghouse	99%	40.6063	22.25
	tons/year	lb/ton					
Overland Conveyor	16,242,500	0.12	974.55	baghouse	99%	9.7455	5.34
	tons/year	lb/ton					
East and West Ore Feeders	14,600,000	0.12	876	venturi	95%	43.8000	10.00
East and West Ofe Feeders	tons/yr	lbs/ton	070	ventun	95%	43.0000	10.00
	toris/yi	105/1011					
Holoflite Dryer #1	81,030	4.93	199.74	venturi/ESP	99.9%	0.1997	0.05
	tons/year	lb/ton					
	,						
Lube Grade Dryer Stack		0.001	8760	venturi/ESP	99.9%	0.0044	0.001
Holoflite Dryer #2		lb/hr	hr/yr				
Rotary Kiln							
Jet Mill Bagehouse	5,760	0.016	7200	baghouse	99.0%	0.0576	0.016
Tech Fine Packaging Bin BH	5,760	0.013	7200	baghouse	99.0%	0.0468	0.013
	tons/year	lb/hr	hr/yr	zageacc	00.070	0.0.00	0.0.0
Pancake Mill Feed Bin BH	1,450	0.001	3412	baghouse	99.0%	0.0017	0.001
Super Fine Packaging Bin BH	1,450	0.024	8760	baghouse	99.0%	0.1051	0.024
	tons/year	lb/hr	hr/yr				
	F 000				22.22/	0.0770	
Pebble Lime Baghouse	5,000	2.2	5.50	baghouse	99.0%	0.0550	0.26
	tons/year	lb/ton					
TOTAL POINT SOURCE TSP						94.6221	
TOTAL FORM SOUNCE 13F						Tons/year	
						i Olisi yeal	

### **THOMPSON CREEK MINE PM10 EMISSONS**

			UNCONTROLLED			TOTAL	TOTAL
	PROCESS	<b>EMISSION</b>	<b>EMISSIONS</b>	CONTROL	CONTROL	<b>EMISSIONS</b>	<b>EMISSIONS</b>
SOURCE	RATE	FACTOR	(TONS/YEAR)	SYSTEM	<b>EFFICIENCY</b>	(TONS/YEAR)	(lb/hr)
SECTION 2: FUEL BURNING	EQUIPMENT						
Waste Oil Heaters							
Truck Shop 1	10,000	31.15	3.6	2800	0.0%	0.1558	0.11214
Truck Shop 2	10,000	31.15	3.6	2800 2800	0.0%	0.1558	0.11214
Wash Bay 1	10,000	31.15	3.6		0.0%	0.1558	0.11214
Wash Bay 2	10,000	31.15	3.6	2800	0.0%	0.1558	0.11214
	gal/year	lb/1000 gal	gal/hr	hr/yr			
Boilers							
Boiler #1	289,080	2.3	33	8760	0.0%	0.3324	0.0759
Hot Oil Boiler	118,260	2.3	13.5	8760	0.0%	0.1360	0.03105
	gal/year	lbs/1000 gals	gal/hr	hr/yr			
				-			
LPG Heating	25,000	0.1	0.00125		0.0%	0.0013	
	gal/year	lb/1000 gal					
ELECTRIC POWER GENERAT	TORS						
Motivator	3,000	0.0022	1490			4.9170	3.278
Mill Auxiliary	500	0.0022	265			0.1458	0.583
Pumpback	500	0.0022	450			0.2475	0.99
Tailings Pumps	500	0.0022	1272			0.6996	2.7984
Tallings Famps	hr/yr	lb/hp-hr	hp			0.0000	2.7001
SECTION 3: PROCESS AND N	     MANUFACTURI	NG OPERATIO	NS				
Primary Crusher	16,242,500	0.05	406.0625	baghouse	99%	4.0606	2.23
,	tons/year	lb/ton					
Overland Conveyor	16,242,500	0.06	487.275	baghouse	99%	4.8728	2.67
Overland Conveyor	tons/year	lb/ton	107.270	bagnoaco	0070	1.0720	2.01
East and West Ore Feeders	14,600,000	0.06	438	venturi	95%	21.9000	5.00
East and West Ofe Feeders	tons/yr	lbs/ton	430	ventun	90%	21.9000	5.00
	10115/ y1	105/1011					

### **THOMPSON CREEK MINE PM10 EMISSONS**

Holoflite Dryer #1	81,030	1.97	79.81455	venturi/ESP	99.9%	0.0798	0.02
	tons/year	lb/ton					
Lube Grade Dryer Stack		0.001	8760	venturi/ESP	99.9%	0.0044	0.001
Holoflite Dryer #2		lb/hr	hr/yr				
Rotary Kiln							
Jet Mill Baghouse	5,760	0.016	7200	baghouse	99.0%	0.0576	0.016
Tech Fine Packaging Bin BH	5,760	0.013	7200	baghouse	99.0%	0.0468	0.013
	tons/year	lb/hr	hr/yr	- angine and			
Pancake Feed Bin BH	1,450	0.001	3412	baghouse	99.0%	0.0017	0.001
Super Fine Packaging Bin BH	1,450	0.024	8760	baghouse	99.0%	0.1051	0.024
	tons/year	lb/hr	hr/yr				
Pebble Lime Baghouse	5,000	0.88	2.20	baghouse	99.0%	0.0220	0.1056
T CODIC EIMC Dagnouse	tons/year	lb/ton	2.20	bagnouse	33.070	0.0220	0.1000
TOTAL POINT SOURCE PM10						38.2533 Tons/year	

# THOMPSON CREEK MINE VOC EMISSIONS

			UNCONTROLLED			TOTAL
	PROCESS	<b>EMISSION</b>	<b>EMISSIONS</b>	CONTROL	CONTROL	<b>EMISSIONS</b>
SOURCE	RATE	FACTOR	(TONS/YEAR)	SYSTEM	<b>EFFICIENCY</b>	(TONS/YEAR)
Mobile Sources						
Haul Trucks	66000	0.192	6.336		0.0%	6.3360
Dozers	9000	0.121	0.5445		0.0%	0.5445
Wheeled Loaders	9000	0.25	1.125		0.0%	1.1250
Motor Graders	9000	0.04	0.18		0.0%	0.1800
Wheeled Dozers	9000	0.192	0.864		0.0%	0.8640
Misc.	2000	0.152	0.152		0.0%	0.1520
	hours/year	lb/hour				
Evaporative Loss						
Gasoline						
Filling - submerged	75000	7.3	0.27375		0.0%	0.2738
Breaking	75000	1	0.0375		0.0%	0.0375
Fueling	75000	11	0.4125		0.0%	0.4125
Spillage	75000	0.7	0.02625		0.0%	0.0263
Desiel	gal/year	lb/1000 gal				0.0000
Loading - submerged	693000	0.014	0.004851		0.0%	0.0049
	gal/year	lb/1000 gal				
TOTAL VOC						9.9564
						Tons/year

### **THOMPSON CREEK MINE CO EMISSIONS**

			UNCONTROLLED			TOTAL	TOTAL
	PROCESS	EMISSION	<b>EMISSIONS</b>	CONTROL	CONTROL	<b>EMISSIONS</b>	EMISSIONS
SOURCE	RATE	FACTOR	(TONS/YEAR)	SYSTEM	<b>EFFICIENCY</b>	(TONS/YEAR)	(lb/hr)
FUGITIVE			,				, ,
Mobile Sources							
Haul Trucks	66000	1.794	59.202		0.0%	59.2020	1.794
Dozers	9000	0.346	1.557		0.0%	1.5570	0.346
Wheeled Loaders	9000	0.572	2.574		0.0%	2.5740	0.572
Motor Graders	9000	0.151	0.6795		0.0%	0.6795	0.151
Wheeled Dozers	9000	1.794	8.073		0.0%	8.0730	1.794
Misc.	2000	0.675	0.675		0.0%	0.6750	0.675
	hours/year	lb/hour				72.7605	
POINT SOURCE							
Waste Oil Heaters	40000	5	0.1	14.4	0.0%	0.1000	0.072
	gal/year	lb/1000 gal		gal/hr			
Boilers							
Boiler #1	289080	5	0.7227		0.0%	0.7227	0.165
Hot Oil Boiler	118260	5	0.29565		0.0%	0.2957	0.0675
	gal/year	lb/1000 gal					
LPG Heating	25000	1.8	0.0225		0.0%	0.0225	
	gal/year	lb/1000 gal					
ELECTRIC POWER GENE	RATORS						
Motivator	3000	0.0068	1490			15.20	10.132
Mill Auxiliary	500	0.0068	265			0.45	1.802
Pumpback	500	0.0068	450			0.77	3.06
Tailings Pumps	500	0.0068	1272			2.16	8.6496
	hr/yr	lb/hp-hr	hp				
TOTAL POINT SOURCE						19.7168	
TOTAL FUGITIVE						72.7605	
TOTAL CO						92.4773	
						Tons/year	

### THOMPSON CREEK MINE **NOX EMISSIONS**

			UNCONTROLLED			TOTAL	TOTAL
	PROCESS	<b>EMISSION</b>	EMISSIONS	CONTROL	CONTROL	<b>EMISSIONS</b>	<b>EMISSIONS</b>
SOURCE	RATE	FACTOR	(TONS/YEAR)	SYSTEM	EFFICIENCY	(TONS/YEAR)	(lb/hr)
FUGITIVE						,	. ,
Mobile Sources							
Haul Trucks	66000	4.116	135.828		0.0%	135.8280	4.116
Dozers	9000	1.26	5.67		0.0%	5.6700	1.26
Wheeled Loaders	9000	1.89	8.505		0.0%	8.5050	1.89
Motor Graders	9000	0.713	3.2085		0.0%	3.2085	0.713
Wheeled Dozers	9000	4.116	18.522		0.0%	18.5220	4.116
Misc.	2000	1.691	1.691		0.0%	1.6910	1.691
	hours/year	lb/hour					
Blasting	200	17				1.70	
	blasts/year	lb/blast				175.12	
	Diagram (	10701001				ton/yr	
POINT SOURCE							
Waste Oil Heaters	40000	55	1.1	14.4	0.0%	1.1000	0.792
vadio dii ridatoro	gal/year	lb/1000 gal	1.1	gal/hr	0.070	1.1000	0.702
Boilers							
Boiler #1	289080	20	2.8908		0.0%	2.8908	0.66
Hot Oil Boiler	118260	20	1.1826		0.0%	1.1826	0.27
Tiot on Bollot	gal/year	lb/1000 gal	1.1020		0.070	1.1020	0.21
LPG Heating	25000	0.014	0.000175		0.0%	0.0002	
Li O ricating	gal/year	Ib/1000 gal	0.000173		0.070	0.0002	
ELECTRIC POWER GENE	RATORS						
Motivator	3000	0.031	1490			69.29	46.19
Mill Auxiliary	500	0.031	265			2.05	8.215
Pumpback	500	0.031	450			3.49	13.95
Tailings Pumps	500	0.031	1272			9.86	39.432
	hr/yr	lb/hp-hr	hp				
TOTAL POINT SOURCE						89.86	
TOATAL FUGITVE						175.12	
TOTAL NOx						264.98	
						Tons/year	

### THOMPSON CREEK MINE **SOX EMISSIONS**

9000 9000 9000 9000 9000	0.454 0.137 0.182 0.086	UNCONTROLLED EMISSIONS (TONS/YEAR) 14.982 0.6165	CONTROL SYSTEM	CONTROL EFFICIENCY	TOTAL EMISSIONS (TONS/YEAR)	TOTAL EMISSIONS (lb/hr)
66000 9000 9000 9000 9000	0.454 0.137 0.182	(TONS/YEAR) 14.982 0.6165	SYSTEM	EFFICIENCY	(TONS/YEAR)	
66000 9000 9000 9000 9000	0.454 0.137 0.182	14.982 0.6165				,
9000 9000 9000 9000	0.137 0.182	0.6165		0.0%		
9000 9000 9000 9000	0.137 0.182	0.6165		0.0%		
9000 9000 9000	0.182				14.9820	0.454
9000 9000		0.040		0.0%	0.6165	0.137
9000	0.086	0.819		0.0%	0.8190	0.182
	0.000	0.387		0.0%	0.3870	0.086
	0.348	1.566		0.0%	1.5660	0.348
2000	0.143	0.143		0.0%	0.1430	0.143
hours/year	lb/hour			TOTAL	18.51	
40000	70	4.40	444	0.00/	4 4000	4.0540
		1.46		0.0%	1.4600	1.0512
gai/year	1b/1000 gai		gai/nr			
289080	71	10.26234		0.0%	10.2623	2.343
118260	71	4.19823		0.0%	4.1982	0.9585
gal/year	lb/1000 gal					
25000	0.0144	0.00018		0.0%	0.0002	
gal/year	lb/1000 gal					
						3.0545
						0.54325
						0.9225
					0.65	2.6076
hr/yr	lb/hp-hr	hp		TOTAL	04.50	
				IOIAL	21.52	
					18.5135	
					21.5208	
					40.0343	
					Tons/year	
	40000 gal/year 289080 118260 gal/year 25000	ATORS   3000   0.00205   500   0.00205   0.00205   0.00205   0.00205   0.00205   0.00205   0.00205   0.00205   0.00205   0.0	ATORS   3000   0.00205   500   0.00205   500   0.00205   500   0.00205   500   0.00205   1272   1.46   1.	Atoria	TOTAL   TOTAL   TOTAL	Nours/year   Ib/hour   Nours/year   Ib/hour   Nours/year   Ib/hour   Nours/year   Ib/hour   Nours/year   Ib/1000 gal   Ia/1000

# THOMPSON CREEK MINE HCI EMISSONS

			UNCONTROLLED			TOTAL	TOTAL
	PROCESS	<b>EMISSION</b>	<b>EMISSIONS</b>	CONTROL	CONTROL	<b>EMISSIONS</b>	<b>EMISSIONS</b>
SOURCE	RATE	<b>FACTOR</b>	(TONS/YEAR)	SYSTEM	<b>EFFICIENCY</b>	(TONS/YEAR)	(lb/hr)
Leach Plant	8,760	0.003		Scrubber	99.0%	0.01314	0.003
	hr/yr	lb/hr					

## **THOMPSON CREEK MINE FUGITIVE EMISSION FACTORS**

<b>SECTION 8: FUGITIVE EMISSIONS</b>				
EMISSION FACTORS	TSP	PM10		
			Compilation of Air Pollutant Emission Factors, Vol. 1, Stationary Point and	
			Area Sources, Fourth Edition, Sept. 1985, Section 8.24, Western Surface	
Drilling	1.3	0.0035	Coal Mining, Updated Sept. 1988, Table - 8.24-4, Page 8.24-8.	
	lb/hole	lb/hole		
			Fugitive Dust Control Technology, General Fugitive Dust Emission Sources,	
Blasting	58.5	23.4	Table 2.2.4-4, Page 54.	
	lb/blast	lb/blast		
			Fugitive Dust Emissions Factors for the Mining Industry, July 1983,	
Overburden Removal			American Mining Congress, Page 49.	
25 yard shovel	0.0007	0.0007		
15 yard shovel	0.0004	0.0004		
loader	0.0004	0.0004		
	lb/ton	lb/ton		
			Fugitive Dust Emissions Factors for the Mining Industry, July 1983,	
Ore Mining			American Mining Congress, Page 49.	
25 yard shovel		0.0007		
15 yard shovel		0.0004		
loader	0.0004	0.0004		
	lb/ton	lb/ton		
			Compilation of Air Pollutants Emission Factors, Vol. 1, Stationary Point and	
			Area Sources, Fourth Edition, Sept. 1985, Section 13.2.4 Aggregate	
Overburden Dumping	0.0032		Handling and Storage Piles, Equation 1.	
	lb/ton	lb/ton		
Hauling/Access Road				
			Compilation of Air Pollutants Emission Factors, Vol. 1, Stationary Point and	
			Area Sources, Fourth Edition, Sept. 1985, Section 11.2 Unpaved Roads,	
haul trucks			updated Seplt.1988, Page 11.2.1-1	
small vehicles	0.39	0.19		
	lb/VMT	lb/VMT		

### **THOMPSON CREEK MINE FUGITIVE EMISSION FACTORS**

			Compilation of Air Pollutants Emission Factors, Vol. 1, Stationary Point and	
			Area Sources, Fourth Edition, Sept. 1985, Section 8.24, Western Surface	
Grading	10.5	0.00	Coal Mining, Updated Sept. 1988, Table 8.24-2, Page 8.24-5.	
	19.5	9.98		
	lb/VMT	lb/VMT		
Bulldozing				
			Compilation of Air Pollutants Emission Factors, Vol. 1, Stationary Point and Area Sources, Fourth Edition, Sept. 1985, Section 8.24, Western Surface	
	8.65	4.32	Coal Mining, Updated Sept. 1988, Table 8.24-2, Page 8.24-5.	
	lb/hour	lb/hour		
		<del>                                     </del>	Compilation of Air Pollutants Emission Factors, Vol. 1, Stationary Point and	
			Area Sources, Fourth Edition, Sept. 1985, Section 1127, Industrial Wind	
Wind Erosion			Erosion Updated sept. 1988, Page 11.2.7-4.	
Total exposed acreage 1260 acres	0.38	0.19		
Total onpossa asisags (_sc sists	lb/acre	lb/acre		
	10/0.0.0	10,00.0		
MOBIL EQUIPMENT COMBUSTION				
Makil Facilization and Combustion			Compilation of Air Pollutants Emission Factors, Vol. 1, Stationary Point and Area Sources, Fourth Edition, Sept. 1985, Section II-7, Heavy Duty	
Mobil Equipment Combustion		0.050	Construction Equipment, Table II-7.1, Page II-7-4&5.	
Haul Trucks	0	0.256		
Dozers Wheeled Loaders	0	0.112		
Motor Graders	0	0.172 0.061		
Wheeled Dozers	0	0.061		
Misc.	0	0.165		
IVIISC.	lb/hour	lb/hour		
	ID/HOUI	ID/HOUI		
			Compilation of Air Pollutants Emission Factors, Vol. 1, Stationary Point and	
			Area Sources, Fourth Edition, Sept. 1985, Section 13.2.4 Aggregate	
Ore drop to Mill Stockpile	0.0032	0.0015	Handling and Storage Piles, Equation 1.	
(low moisture ore)	lb/ton	lb/ton		

### **THOMPSON CREEK MINE FUGITIVE EMISSION FACTORS**

			Compilation of Air Pollutants Emission Factors, Vol. 1, Stationary Point and	
			Area Sources, Fourth Edition, Sept. 1985, Section 13.2.4 Aggregate	
Truck dumping into Crusher	0.0032	0.0015	Handling and Storage Piles, Equation 1.	
	lb/ton	lb/ton		
Portable Crusher				
Truck unloading	0.0001	0.0001	AP 42 Volume 1, Fifth Edition, Table 11.19.2-2	
Screening	0.025	0.0087	AP 42 Volume 1, Fifth Edition, Table 11.19.2-2	
Primary Crushing	0.5	0.05	AP 42 Volume 1, Fifth Edition, Table 11.24.2	
Screening	0.025	0.0087	AP 42 Volume 1, Fifth Edition, Table 11.19.2-2	
Conveying	0.003	0.0011	AP 42 Volume 1, Fifth Edition, Table 11.19.2-2	
Secondary Crushing	0.5	0.05	AP 42 Volume 1, Fifth Edition, Table 11.24.2	
Conveying	0.003	0.0011	AP 42 Volume 1, Fifth Edition, Table 11.19.2-2	
Drop process	0.003	0.0011	AP 42 Volume 1, Fifth Edition, Table 11.19.2-2	
	lbs/ton	lbs/ton		
			Note:	
			Equation 1 - $E=k(0.0032)(U/5)^{1.3}/(M/2)^{1.4}$	
			E (PM) =	0.00322479
			E (PM <sub>10</sub> ) =	0.00152524
			k <sub>PM</sub> =	0.74
			k <sub>PM10</sub> =	0.35
			M =	2.525
			U =	8.15

	T	1 OGITIVE LIVIISSI	<del></del>	ı	T
SECTION 8: FUGITIVE EMISSIONS					
	PROCESS				
FUGITIVE SOURCES	RATE				
Drilling	7,750				
	holes/year				
Blasting	200				
-	blasts/year				
Overburden Removal					
25 yard shovel	9,475,000				
15 yard shovel	4,667,300				
loader	6,500,000				
	tons/year				
	,				
Ore Mining					
25 yard shovel	7,475,000				
15 yard shovel	0				
loader	0				
	tons/year				
	,				
Overburden Dumping	28,117,300				
	tons/year				
	,				
Hauling/Access Road					
haul trucks	386,167				
small vehicles	210,000				
	VMT				
Grading					
<u></u>	8,200				
	VMT				
Bulldozing					
<u>-</u> <u>-</u>	4,400				
	hours				
				1	

Wind Erosion						
Exposed acres	1,260					
Exposed acres	-					
	acres					
FUGITIVE EMISSIONS TSP						
FUGITIVE EMISSIONS 15P			UNCONTROLLED			TOTAL
	PROCESS	EMISSION	EMISSIONS	CONTROL	CONTROL	EMISSIONS
SOURCE	RATE	FACTOR	(TONS/YEAR)	SYSTEM	EFFICIENCY	(TONS/YEAR)
	7,750	1.3000	5.0375		99%	0.05
Drilling		lb/hole	5.0375	cyclone	99%	0.05
	holes/year	ib/noie				
Dioating	200	F0 F000	F 0F		00/	F 0F
Blasting	200	58.5000	5.85		0%	5.85
	blasts/year	lb/blast				
Overthouse Description						
Overburden Removal	1 0 475 000	0.0007	0.04005		00/	2.20
25 yard shove		0.0007	3.31625		0%	3.32
15 yard shove		0.0004	0.93346		0%	0.93
loade	, ,	0.0004	1.3		0%	1.30
	tons/year	lb/ton				
Ore Mining						
25 yard shove	7,475,000	0.0007	2.61625		0%	2.62
15 yard shove	el .	0.0004	0		0%	0.00
loade	r	0.0004	0		0%	0.00
	tons/year	lb/ton				
Overburden Dumpin	28,117,300	0.0032	44.98768		0%	44.99
O Verburgeri Barripin	tons/year	lb/ton	44.507.00		070	11.00
	torior year	10/1011				
Hauling/Access Road						
haul truck	s 386,167	25.5000	4923.62925	water	75%	1230.91
small vehicle		0.3900	40.95	water	75%	10.24
	VMT	lb/VMT				
Grading						
	8,200	19.5000	79.95		0%	79.95
	VMT	lb/VMT				

		I				
Bulldozing						
	4,400	8.6500	19.03		0%	19.03
	hours	lb/hour				
Wind Erosion						
	1,260	0.3800	0.2394		0%	0.24
	acres	lb/acre				
MOBIL EQUIPMENT COMBUSTION						
Haul Trucks	66,000	0.0000	0		0.0%	0.00
Dozers	9,000	0.0000	0		0.0%	0.00
Wheeled Loaders	9,000	0.0000	0		0.0%	0.00
Motor Graders	9,000	0.0000	0		0.0%	0.00
Wheeled Dozers	9,000	0.0000	0		0.0%	0.00
Misc.	2,000	0.0000	0		0.0%	0.00
	hours/year	lb/hour				
One does to Mill Ote should	40.040.500	0.0032	26		00/	05.00
Ore drop to Mill Stockpile	16,242,500		-		0%	25.99
	tons/year	lb/ton	tons/year			
Truck dumping into Crusher	16,242,500	0.0032	26	water	90%	2.60
	tons/year	lb/ton	tons/year			
Portable Crusher						
Truck unloading	700,000	0.0001	0.04		0%	0.04
Screening	700,000	0.0250	8.75		0%	8.75
Primary Crushing	700,000	0.5000	175.00	water	90%	17.50
Screening	700,000	0.0250	8.75		0%	8.75
Conveying	700,000	0.0030	1.05	water	90%	0.11
Secondary Crushing	700,000	0.5000	175.00		0%	175.00
Conveying	700,000	0.0030	1.05		0%	1.05
Drop process	700,000	0.0030	1.05		0%	1.05
	tons/year	lbs/ton				
TOTALTSP FUGITIVE						1640.25
						Tons/year

FUGITIVE EMISSIONS PM10						
			UNCONTROLLED			TOTAL
	PROCESS	<b>EMISSION</b>	EMISSIONS	CONTROL	CONTROL	<b>EMISSIONS</b>
SOURCE	RATE	FACTOR	(TONS/YEAR)	SYSTEM	EFFICIENCY	(TONS/YEAR)
Drilling	7,750	0.0035	0.0135625	cyclone	99%	0.00
	holes/year	lb/hole				
Blasting	200	23.4000	2.34		0%	2.34
3	blasts/year	lb/blast				
Overburden Removal						
25 yard shovel	9,475,000	0.0007	3.31625		0%	3.32
15 yard shovel	4,667,300	0.0004	0.93346		0%	0.93
loader	6,500,000	0.0004	1.3		0%	1.30
	tons/year	lb/ton				
Ore Mining						
25 yard shovel	7,475,000	0.0007	2.61625		0%	2.62
15 yard shovel	0	0.0004	0		0%	0.00
loader	0	0.0004	0		0%	0.00
	tons/year	lb/ton				
Overburden Dumping	28,117,300	0.0015	21.087975		0%	21.09
	tons/year	lb/ton				
Hauling/Access Road						
haul trucks	780,000	11.5400	4500.6	water	75%	1125.15
small vehicles	210,000	0.1900	19.95	water	75%	4.99
	VMT	lb/VMT				
Grading						
	16,400	9.9800	81.836		0%	81.84
	VMT	lb/VMT				
Bulldozing						
	4,400	4.3200	9.504		0%	9.50

	hours	lb/hour				
Wind Erosion						
	1,260	0.1900	0.1197		0%	0.12
	acres	lb/acre				
MOBIL EQUIPMENT COMBUSTION						
Haul Trucks	66,000	0.2560	8.448		0.0%	8.45
Dozers	9,000	0.1120	0.504		0.0%	0.50
Wheeled Loaders	9,000	0.1720	0.774		0.0%	0.77
Motor Graders	9,000	0.0610	0.2745		0.0%	0.27
Wheeled Dozers	9,000	0.1650	0.7425		0.0%	0.74
Misc.	2,000	0.1390	0.139		0.0%	0.14
	hours/year	lb/hour				
Ore drop to Mill Stockpile	16,242,500	0.0015	12		0%	12.18
Old Grop to Mill Groompile	tons/year	lb/ton	tons/year		070	12.10
Tanala di manina india Caraban	40.040.500	0.0045	40		000/	4.00
Truck dumping into Crusher	16,242,500	0.0015	12	water	90%	1.22
	tons/year	lb/ton	tons/year			
Portable Crusher						
Truck unloading	700,000	0.0001	0.04		0%	0.04
Screening	700,000	0.0087	3.05		0%	3.05
Primary Crushing	700,000	0.0500	17.50	water	90%	1.75
Screening	700,000	0.0087	3.05		0%	3.05
Conveying	700,000	0.0011	0.39	water	90%	0.04
Secondary Crushing	700,000	0.0500	17.50		0%	17.50
Conveying	700,000	0.0011	0.39		0%	0.39
Drop process	700,000	0.0011	0.39		0%	0.39
	tons/year	lbs/ton				
TOTALPM10 FUGITIVE						1303.66
						Tons/year



August 15, 2007

Dan Pitman
Air Quality Permitting
Division of Environmental Quality
1410 N. Hilton
Boise, Idaho 83706

Re: Air Quality Tier II Operating Permit No. T2-050508 - Comments

Dear Mr. Pitman,

In response to your July 23, 2007 e-mail, and your subsequent agreement to provide us additional time to respond, the Thompson Creek Mining Company (TCMC) is submitting the following comments for your consideration on the above Tier II operating permit.

#### Comment #1:

Section 8.1, Process Description should be revised as follows:

Pebble lime is delivered to the facility and pneumatically conveyed to the lime silo. Emissions from this transfer point are controlled by a baghouse (Pebble Lime Baghouse). The pebble lime is mixed with water to form slurry and fed into the SAG mill, neutralization tank, or the tailings line.

Please note that pebble lime is not used to process the ore to HPM. Section 3.8 of the permit application, titled "Reagents," describes how the lime is used. The pebble lime delivery should not be considered part of the HPM Milling & Packaging as lime in not used to convert concentrate grade to HPM grade, nor is lime used in milling or packaging HPM.

#### Comment #2:

The emission control description in Section 5 of the permit, titled "East and West Ore Feeders," mistakenly lists a venturi scrubber and an emission limit related to one stack to serve both the East and West Ore Feeders. Section 3.3 in the permit application, titled "Crushing and Grinding" states as follows: "Emissions from each ore feeder are controlled with individual wet venturi scrubbers and vented to the atmosphere through corresponding stacks." Also, Appendix C in the application, titled "Application Form/Emissions Inventory, Source General Information" indicates that there are "2" wet venturi scrubbers, while "Appendix C Application Form/Emissions Inventory, Stack Information" identifies a separate stack for each ore feeder. In summary, the East Ore Feeder has a venturi scrubber with a corresponding stack and the West Ore Feeder has a venturi scrubber with a corresponding stack (i.e., there are two scrubbers and two stacks).

If you have any questions regarding these comments, please contact Bert Doughty or myself at (208)838-2200.

Sincerely,

Eric Tilman Environmental Engineer, Thompson Creek Mine



August 15, 2007

Dan Pitman Air Quality Permitting Division of Environmental Quality 1410 N. Hilton Boise, Idaho 83706

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Eric Tilman Environmental Engineer, Thompson Creek Mine

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